Another Big gift from Subbu & Sujatha.

Problem Statement

Finally,it was a very Big gift presented to Reethu by her beloved uncle and aunty Subbu & Sujatha.They know that,,Reethu likes character strings a lot.So,they presented a character string to Reethu of length 'L'.But reethu wondered if the presented string if a 'PANGRAM' and 'PALINDROME' as well.

Constraints: 0<=L<=100000.

referrence: Pangram: https://en.wikipedia.org/wiki/Pangram

Input Format

The first line of input contains a character string in which all characters are of lower-case.

Output Format

Output 'YES' if the input string is 'PANGRAM' and 'PALINDROME' as well, else print 'NO', without quotes.

Sample Input

abcdefghijklmnopqrstuvwxyzyxwvutsrqponmlkjihgfedcba

Sample Output

YES

Explanation

Given string is 'PANGRAM' and 'PALINDROME' as well.so 'YES'